17

-9-B

National Institute of Environmental Health Sciences

Director, Office of Environmental Affairs August 2, 1977

Director, NIEHS

Proposed Standard for Occupational Exposure to Benzene

I am concerned about the tone and content of the Departmental response to Dr. Eula Bingham, OSHA, DOL, on the Proposed Standard for Occupational Exposure to Benzene. In a memorandum of June 30, Dr. Hans Falk, NIEHS, clearly stated more than once that the standard of 1 ppm averaged over an 8-hour period with a 5 ppm ceiling seems prudent and reasonable. The Department's July 13 letter to Dr. Bingham does not reflect Dr. Falk's conviction that the standard is appropriate.

I ask that you supplement the letter to the Department of Labor suggesting that although there are problems in evaluating the carcinogenic risk to man of benzene the proposed emergency standard is in our opinion prudent and reasonable.

David P. Rall, M.D., Ph.D.

cc:
Dr. Falk
Mr. Osheroff

bcc:
Dr. Bingham

NIEHS:OD:D.P.RALL:dgr 8-2-77

File with Berg letter from HEW

- NIEHS
P.O. Box 12233, Research Triangle Park, N. C. 27709

Director, NIEHS

June 30, 1977

Director, Office of Health Hazard Assessment, NIEHS

Comments on Proposed Standard for Occupational Exposure to Benzene

The standard of 1 ppm averaged over an 8-hour period with a 5 ppm ceiling seems prudent and reasonable to me. However, I take exception to the statement on page 27453, first sentence of last paragraph, "There appears to be no safe level for exposure to a carcinogen, and particularly as to benzene as pointed out in the ETS." There is no proof of that general statement or particular information on benzene in the report that would substantiate the assertion.

The leukemogenic hazard of benzene exposure is adequately documented in the report, even though such caveats as the lack of cause and effect relationship in these observations on humans is never mentioned. It is not obvious to the lay reader that in the various occupational situations the workers are exposed to other chemicals besides benzene, particularly when benzene only serves as solvent or minor constituent of a product.

The animal data on the leukemogenic risk are very much curtailed which however is all right. However, it should allow on page 27468, second column, some short mention of the many studies on mice that were completely negative to assure the reader that all studies have been considered. The conclusion however is not dependent on animal studies and therefore this shortcoming may be overlooked.

The ETS therefore is a prudent action on the part of OSHA and should meet with approval, in spite of the facts mentioned above; namely, that a real cause/effect relationship is not established in the human data, the animal data are largely inadequate or negative and the statement on the no safe exposure level, particularly for benzene is not documentable.

It might be useful to recommend an additional effort to study a population exposed to benzene alone, but the evidence is convincing already that benzene affects the bone marrow and can produce blood dyscrasias, chromosomal aberrations and above all leukemia.

Hans L. Falk, Ph.D.

Attachment

HLFalk:jhe
6-30-77